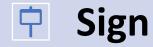


The cognitive basis of language





a form which stands for something else, which we understand as its meaning

The relation between a sign and its meaning can be of three different kinds indexical * iconic * symbolic

Indexical signs point to what they stand for

They "point" to a person's internal emotional states of surprise or anger





Emoticons

Iconic signs

- provide images of what they stand for
- An iconic sign is similar to the thing it represents



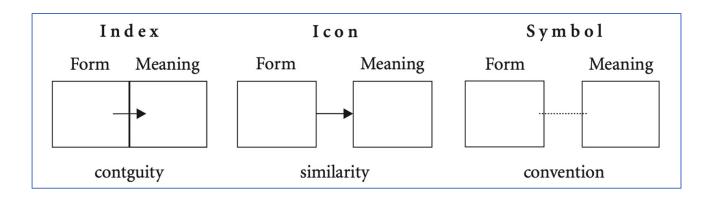
Yield

Symbolic signs

involve a purely conventional relationship between the form of the sign and its meaning



Links in the three types of signs



1. The principle of indexicality in language

This **egocentric** view of the world shows in our use of language.

here, there, now, then, today, tomorrow, this, that, come, go, I, you, we

deictic expressions relate to the speaking ego, who imposes his perspective on the world.

The girl is in front of me.

2. The principle of iconicity in language



Iconicity manifests itself in three sub-principles



sequential order



h distance



quantity



2.1. Sequential-order iconicity

the sentences have the same words but convey different meanings because of the different order of the adjective blue:



- Paul painted the blue door.
- Paul painted the door blue.

Binary expressions \supset reflect temporal succession

Rules and Now and Now and regulations then again Safe and Now or Sooner or sound later never Day and Law and Out and night order about

2.2. The principle of distance

things which **belong together conceptually** tend to be **put together** linguistically, and things that **do not belong together** are put **at a distance**

a. A noisy group was hanging around the bar.

b. A group of noisy youngsters <u>were</u> hanging around the bar.

The principle of distance also accounts for the **types** of **subordinate clauses**

- I made her leave.
- I wanted her to leave.
- I hoped **that she would** leave.

2.3. The iconic principle of quantity

accounts for the tendency to associate more form with more meaning and less form with less meaning

By stretching the o-sound of long as in

That's a looooong story

iconically expresses the idea of an "extremely long" story



3. The principle of symbolicity in language

the conventional pairing of form and meaning

- house in English
- Haus in German
- huis in Dutch
- casa in Italian and Spanish
- maison in French
- *talo* in Finnish
- dom in Russian

2. Cognitive linguistics and functionalism

The general assumption behind Cognitive Linguistics is that language reflects patterns of thought.

Language offers a window into cognitive function, providing insights into the nature, structure and organisation of thoughts and ideas.

Cognitive Linguis An Introduction

Vyvyan Evans and Melanie Gree



Cognitive linguistics

emerged in the late 1970s out of dissatisfaction with formal approaches to language

sees language as an interactive part of the cognitive abilities of the human mind:

perception, memory, attention, emotion, reasoning

In 1989/90 International Cognitive Linguistics Society

• journal Cognitive Linguistics



Ronald Langacker

this 'marked the birth of cognitive linguistics as a broadly grounded, self-conscious intellectual movement'

Cognitive linguistics belongs to the functionalist tradition

The symbolic function

language encodes and externalises our thoughts by using symbols

one of the functions of language is symbolise or represent concepts

The interactive function

language serves an interactive function
It involves a process of transmission by the speaker, and decoding and interpretation by the hearer



3. Commitments of cognitive linguistics

- 1. Generalization **Commitment**
- 2. Cognitive **Commitment**



1. Generalization Commitment

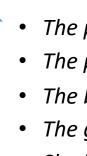
a commitment to the characterization of **general principles** that are responsible for all aspects of human language

It means finding out whether there are **common structuring principles** that hold across different aspects of language and what they are.

Cognitive linguists argue that **polysemy** reveals important commonalities between lexical, morphological and syntactic organization.







- The picture is **over** the sofa. ABOVE
- The picture is **over** the hole. COVERING
- The ball is **over** the wall. ON-THE-OTHER-SIDE-OF
- The government handed over power. TRANSFER
- She has a strange power over me. CONTROL



Polysemy in morphology agentive -er suffix

- teacher
- villager
- toaster
- best-seller

functional ability or attribute



2. Cognitive Commitment

principles of linguistic structure should reflect what is known about human cognition from other disciplines

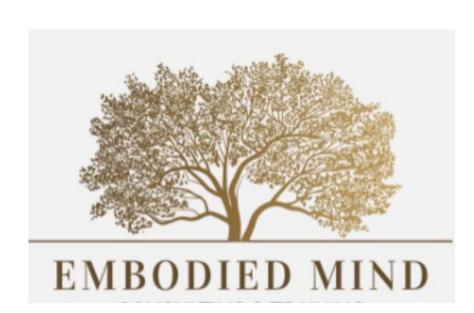
language and linguistic organization should reflect general cognitive principles rather than cognitive principles that are specific to language

Attention: profiling in language



- The boy kicks over the vase.
- The vase is kicked over.
- The vase smashes into bits.
- The vase is in bits.

4. The embodied mind



4. The embodied mind

rationalist view

it is possible to study language as a *formal system*, without taking into account the nature of human bodies or human experience



empiricist view

human mind and language cannot be investigated in isolation from human embodiment

4.1. Embodied experience

- People have a specific view of the world due to the unique nature of their physical bodies.
- The construal of reality is mediated by the nature of our bodies.
- Colour



the human visual system has *three kinds* of colour channels





squirrels, rabbits: two colour channels





goldfish, pigeons : four colour channels

4.2. Embodied cognition

- The concepts we have access to and the nature of the 'reality' we think about are a function of our embodiment
- ➤ embodied experience manifests itself at the cognitive level in terms of *image schemas*
- image schema is a recurring structure within our cognitive processes which establishes patterns of understanding and reasoning

THE BOD' INTHE MINI The Bodily Basis of Meaning, Imagination, and Reason Mark Johnson

embodied concepts can be extended to provide more abstract concepts

The CONTAINER image schema

containers are meaningful in our everyday experience

conceptual projection

LOVE is structured in terms of a CONTAINER

- She is in love.
- Roy is in trouble.
- The government is in a deep crisis.



4.3. Experiential realism

Language does not directly reflect the world. It reflects human construal of the world

our 'world view' appears to us through the lens of our embodiment

Ray Jackendoff:

The human reality is 'projected reality'



- an external reality that is reflected by concepts and by language
- this reality is mediated by our human experience which constrains the nature of this reality 'for us'

5. Linguistic and conceptual categories



Language resides, not in dictionaries, but in the minds of the speakers.

The notion of **concept** *⇔ a* person's **idea** of what something in the world is like

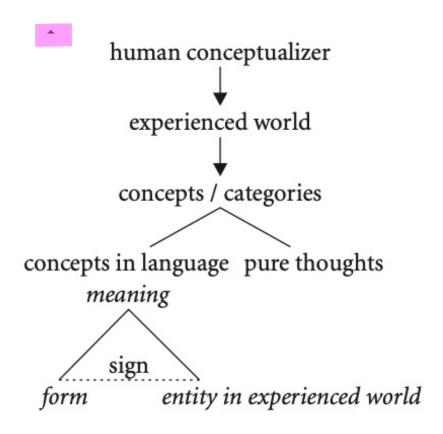
concepts which slice reality into relevant units are called categories

Conceptual categories are concepts of a set as a whole:

MUSIC

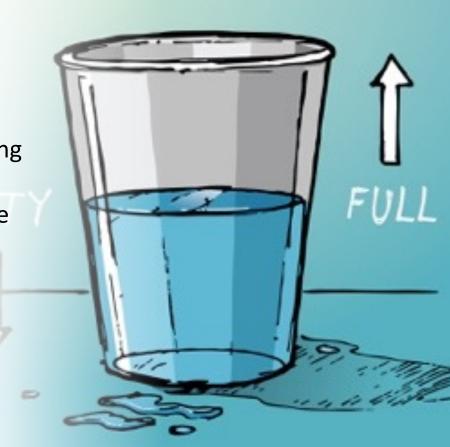
↓↓
JAZZ
CLASSICAL
ROCK

Model of the conceptual world

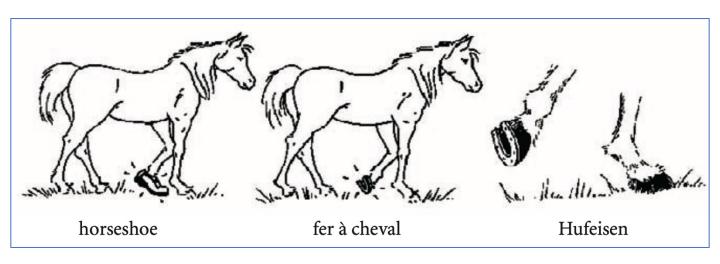


 One person may describe a half-filled glass as half full and another person may describe the same thing as half empty.

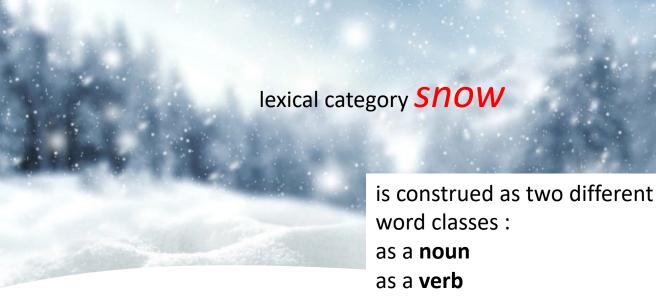
• Each person's choice between various alternatives is called construal.



construal in various languages



English construes	French	German
as horseshoe	fer à cheval	as Hufeisen
'shoe for horse'	'iron for horse'	'hoof iron'

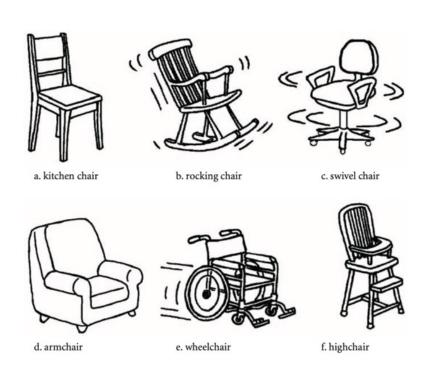


Conceptual categories show up as grammatical categories

- Look at that snow!
- It's snowing again.

Lexical categories are defined by their content, grammatical categories provide the structural framework for the lexical material.

Lexical category "chairs"



The best member ⇒ the prototypical member

Grammatical categories : word classes

1	noun	mother, bird, pleasure
2	pronoun	I, you, she, someone, which
3	determiner	the, a, this, two
4	verb	say, cry, consider
5	adjective	big, rich, happy
6	adverb	happily, merely, very
7	preposition	at, on, during, amongst
8	particle	(hang) up, (hand) in
9	conjunction	and, because, after, before
10	interjection	alas!, oops!, wow!

Word classes

Traditional definitions

were based on the erroneous assumption that the word classes are clearly definable and all the words of a language can be neatly grouped into one of them.

Cognitive view different types of wordsare subsumed under a grammatical category.

The category NOUN subsumes disparate types of nouns

prototypical noun: denotes a concrete, physical thing

concrete entity

We needed a new telephone.

We called the telephone *company*.

They installed it in the afternoon

But they did a lousy job.

I am amazed at their stupidity.

refers to a property and is more adjective-like in meaning

denotes a non-

less prototypical:

has no concrete existence

refers to an action and is more verblike in its meaning

6. Cognitive semantics & cognitive grammar



Cognitive semantics is concerned with investigating the relationship between experience, the conceptual system and the semantic structure encoded by language.



investigates *knowledge representation* (conceptual structure) and *meaning construction* (conceptualisation)

Cognitive approaches to grammar

encompass the inventory of linguistic units defined as form-meaning pairings

Meaning and grammar are seen as two sides of the same coin:



- to take a cognitive approach to grammar is to study the units of language and hence the language system itself
- to take a cognitive approach to semantics is to attempt to understand how this linguistic system relates to the conceptual system, which in turn relates to embodied experience

VCognitive linguistics

The study of language in a way that is compatible with what is known about the human mind, treating language as reflecting and revealing the mind

V Cognitive semantics

The study of the relationship between experience, embodied cognition and language

VCognitive approaches to grammar

The study of the symbolic linguistic units that comprise language

7. Cognitive grammar

Cognitive Grammar is based on the insight that grammar is the product of human cognition.

Grammar is not only an integral part of cognition but also a key to understanding it [Langacker 2008: 4].



1. The grammar of a language is part of human cognition and interacts with other cognitive faculties (perception, attention, memory).

- 2. The grammar of a language **reflects generalizations** about phenomena in the world as the speakers experience them.
- 3. Forms of grammar are meaningful and never "empty" or meaningless.

4. The grammar of a language represents the whole of a native speaker's knowledge of both the lexical categories and the grammatical structures of language.

 5. The grammar of a language is usage-based in that it provides speakers with a variety of structural options to present their view of a given scene.

Basic assumptions

Things, relations and conceptual cores

Things are independent conceptual units that are typically coded as **nouns**

Things → nouns



The most prototypical things relate to *physical objects* →



laptops, tables



Less prototypical things are *abstract units* → *bliss, prolixity*

Relations are dependent short-lived conceptual units

Relations ⇒ verbs, adjectives, adverbs, prepositions, conjunctions

flexibility between *things* and *relations* \Rightarrow multifunctional use of the word *thing*

- a. Let's not make a big thing out of it. [issue]
- b. Painting is an amazing thing. [experience]
- c. Do the wrong *thing* and you'll get it in the neck. [action]
- d. How are *things* today? [state of affairs]

Conceptual cores

a relation combined with two or more conceptual entities participating in it

- The structure of the conceptual core is based on the principle of figure and ground
- one entity in a conceptual core is the <u>figure</u>, the other serves as the <u>ground</u>
 - Ann is fond of jazz music.

[Ann - figure + is fond of - relation + jazz music - ground]

- the goldfish in the pond.
- [goldfish figure + in relation + pond ground]

one conceptual entity \Longrightarrow FIGURE

adjectives

intransitive verbs

do not require a ground to be expressed as a second entity

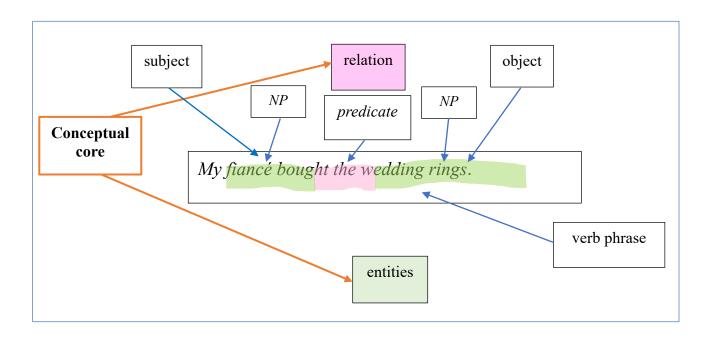
Joanna is smart.

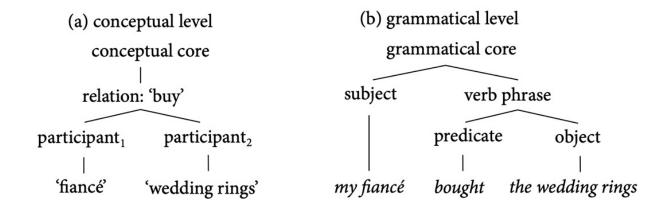
The baby is sleeping.

No ground entity

Conceptual core: Grammatical core

My fiancé bought the wedding rings.





The conceptual core of a situation and the grammatical core of a sentence

Grounding: Grounding elements

The term **ground** is used to indicate the speech event, its participants (*speaker and hearer*), their interaction, and the immediate circumstances (*time and place of speaking*).

<u>In grounding a situation</u>, the speaker provides information about

- who or what he is talking about
- when the situation happened in relation to the present moment
- whether it really happened

Nominal grounding

✓ the, this, that, some, a, each, every, no, any

the speaker directs the hearer's attention to the intended discourse referent, which may or may not correspond to an actual individual

Clausal grounding

✓ s, -ed, may, will, should

situates the profiled relationship with respect to the speaker's current conception of reality.

My fiancé bought the wedding rings and may also buy a necklace.

Setting: Setting elements

setting

refers to the background against which a situation is set

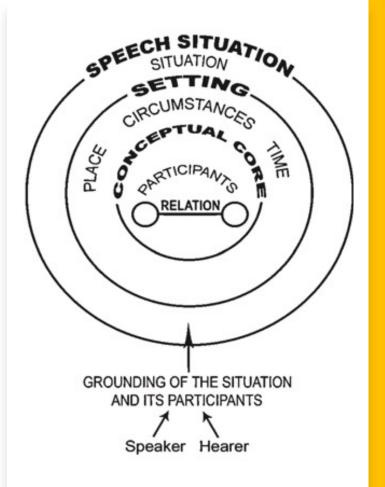
Setting elements provide information

- where and when the event happened
- why it happened
- the condition under which it happened

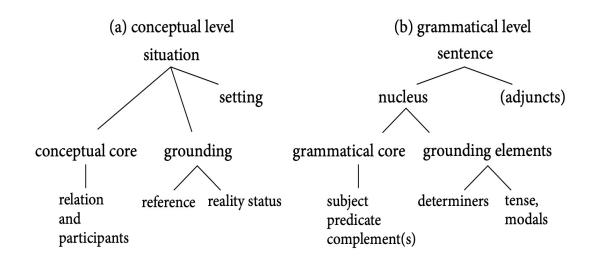
- Unlike grounding elements, setting elements do not give the speaker's subjective assessment of the situation and are not obligatory grammatical forms.
- Setting elements are optional.



Structure of a situation



conceptual and grammatical units correspond



Proposition

 that part of the meaning of a sentence or clause that is constant, irrespective of the form it takes

My fiancé bought the wedding rings.

The wedding rings were bought by my fiancé.

☐ Did my fiancé buy the wedding rings?

the same proposition

'my fiancé — buy — the wedding rings'